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REMARKS

Claims 1-12 were pending when last examined, of which Claims 1-3 and 12 stand rejected. Applicants thank the Examiner for allowing Claims 4-11. Claims 1 and 12 have been amended.

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Claim Rejections – 35 U.S.C. § 102

Claim 12 is rejected under 35 USC § 102(a) as being anticipated by U.S. Published Patent Application No. 2003/0090448 to Tsumura et al. ("Tsumura").

10 Claim 12 is patentable over Tsumura at least because it recites, "reversing a state of the inversion signal after applying the image data to the odd pixels" There is no teaching in Tsumura to divide the pixels into two groups (odd and even pixels) and supply data to one group before reversing the state of the inversion signal. Tsumura discusses generally four modes of driving [Tsumura, paragraphs 14-17] without suggesting that the pixels be divided into two groups that receive image data separately.

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Claim Rejections – 35 U.S.C. § 103

Claims 1-3 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsumura in view of U.S. Published Patent Application No. 2002/0097214 to Song ("Song").

Claim 1 is patentable over Tsumura and Song at least because it recites the following:

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... the signal controller changes a state of the inversion signal between an end of the transmission of the first image data and a start of the transmission of the second image data and the polarity of the common voltage between an end of the application of the data voltages for a row and a start of the application of the data voltages for a next row.

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First, in the invention of Claim 1, the change of the inversion signal is timed according to transmission on the *data lines* (D₁, D₂, D₃, etc. in Application's FIG. 1) while the change of the common voltage polarity is timed according to application of voltages to the rows (G₁, G₂, etc. in Application's FIG. 1). This is not the case in Tsumura. In Tsumura, if line-inversion mode is used, Vcom alternates every line [Tsumura, paragraph 81] and it is implied that the timing of the inversion signal, which changes Vcom, is dictated by some event with the lines. On the other hand, if row-inversion mode is used, Vcom alternates every row and the inversion signal would change its state according to the change in rows as well.

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Furthermore, it is unclear when the "inversion signal" is applied to the pixels in Tsumura because Tsumura is silent as to the timing of the inversion signal. Tsumura only discloses the timing of the common voltage (Vcom) with respect to the first voltage (Vsd1).

As evidenced by the fact that the inversion signal and the change in Vcom are off-phase in the invention, the inversion signal and the change in the polarity of the common voltage Vcom do not need to coincide. Although Tsumura states that Vcom changes after every line in a per-line inversion driving, it is unclear when the inversion signal changes its state.

5 The rejection of Claim 1 is based on the assumption that Tsumura teaches the above elements recited in Claim 1. However, as explained, this is not the case. Hence, Claim 1 is patentable over Tsumura and Song.

Claims 2 and 3 depend from Claim 1 and are therefore patentable over Tsumura and Song for the same reasons as Claim 1.

10 Claim 2 is patentable over Tsumura and Song for the additional reason that it recites, "a phrase of the common voltage is delayed by half of a horizontal period with respect to a phase of the inversion signal." Although page 5 of the Office Action states Tsumura's data is half a period out of phase with the common voltage, Tsumura's FIG. 16 shows that this is not the case. The data (Vsd1) is transmitted almost synchronously with the change in Vcom,
15 and the phase difference between Vd1 and Vcom is much less than half-a-period. Song does not disclose or suggest anything about the relative timing of the inversion signal and Vcom.

 Claim 3 is patentable over Tsumura and Song for the additional reason that it recites, "a period of the inversion signal and a period of the common voltage are equal to two horizontal periods." Tsumura does not state or suggest anything about the period of its
20 inversion signal. Nor does Song.

Drawings

 Upon reviewing the application, it came to Applicants' attention that the originally submitted Figure 5 contains an error. The originally submitted Figure 5 shows a "Vcom" being supplied to Gray Voltage Generator 800. However, as one can tell from reading the
25 specification, Vcom is not supplied to the Gray Voltage Generator 800. A replacement Figure 5 without the "Vcom" being supplied to Gray Voltage Generator 800 is enclosed. No new matter is added.

Conclusion

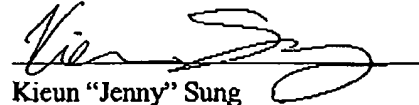
Applicants believe that Claims 1-12 are in condition for allowance. If the Examiner wishes to discuss any aspect of this application, the Examiner is invited to telephone Applicants' undersigned attorney at (408) 392-9250.

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Respectfully submitted,

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